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ABSTRACT

EQUALS is a teacher education program that helps elementary and secondary educators acquire methods and materials to attract minority and female students to mathematics. It supports a problem-solving approach to mathematics which has students working in groups, uses active assessment methods, and incorporates a broad mathematics curriculum presented in a variety of contexts. This document is one of a set of five Investigations Units and focuses on the mathematics of navigation in the spirit of the wilderness sport of orienteering. In this unit students will be challenged to give clear written and oral directional instructions; create and follow orienteering paths using angle-ometers, paces, and meter-cords; draw scale maps of paths using protractors and rulers; and investigate what happens to paths when distances are scaled up or down by multiplying and by adding. investigations sessions include: (1) Walking Paths with the Angle-ometer; (2) Precision Orienteering with a Meter-cord; (3) Orienteering on Paper with Protractors; (4) Angle Check; (5) Navigating in the Dark; (6) Changes in Paths Resulting from Changes in Length; (7) Group Research Project: What Happens to Paths When Lengths Are Changed?; (8) Faculty Measuring Tools; and (9) Sharing Individual Projects. Also included are Spanish translations of selected student worksheets and a list of resources. (JRH)

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